Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

General

Title

Maternal and newborn care: proportion of women who were induced with an indication of post-dates and were less than 41 weeks' gestation at delivery.

Source(s)

Maternal newborn dashboard - key performance indicator criterion reference guide, version 1.3. Ontario (Canada): Better Outcomes Registry and Network (BORN) Ontario; 2014 Jul 2. 12 p.

Measure Domain

Primary Measure Domain

Related Health Care Delivery Measures: Use of Services

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the proportion of women who were induced with an indication of post-dates and were less than 41 weeks' gestation at delivery.

Rationale

The Society of Obstetricians and Gynecologists of Canada (SOGC) defines induction of labour as "the artificial initiation of labour before its spontaneous onset for the purpose of delivery of the fetoplacetal unit" (Crane, 2001). At term (37+0/7 to 41+0/7 weeks), induction may be chosen over expectant management due to a variety of maternal and/or fetal medical indications (e.g., maternal diabetes, fetal intrauterine growth restriction); conditions for which the benefits of the onset of labour are thought to outweigh the potential risks posed by induction (Caughey et al., 2009). Induction in the absence of a medical indication is termed elective and the benefits, harms and costs of elective induction continue to be debated in the literature (Caughey et al., 2009).

Despite the uncertainty surrounding elective induction, its use continues to grow and appears to be increasing at a rate faster than inductions as a whole (Caughey et al., 2009).

Evidence for Rationale

Caughey AB, Sundaram V, Kaimal AJ, Cheng YW, Gienger A, Little SE, Lee JF, Wong L, Shaffer BL, Tran SH, Padula A, McDonald KM, Long EF, Owens DK, Bravata DM. Maternal and neonatal outcomes of elective induction of labor. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2009 Mar. (Evidence report/technology assessment; no. 176).

Caughey AB, Sundaram V, Kaimal AJ, Gienger A, Cheng YW, McDonald KM, Shaffer BL, Owens DK, Bravata DM. Systematic review: elective induction of labor versus expectant management of pregnancy. Ann Intern Med. 2009 Aug 18;151(4):252-63, W53-63. PubMed

Crane J. Induction of labour at term. Society of Obstetricians and Gynaecologists of Canada clinical practice guideline, No. 107. August 2001. J Soc Obstet Gynecol Can. 2001;23(8):717-28.

Konnyu K, Grimshaw J, Moher D. What is known about the maternal and newborn risks of elective induction of women at term?. Ottawa (Canada): Ottawa Hospital Research Institute; 2011 Mar. 13 p. (KTA Evidence Summary; no. 10).

Primary Health Components

Elective induction at term; risks

Denominator Description

Total number of women who were induced with an indication of post-dates (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Number of women who were induced with an indication of post-dates and were less than 41 weeks' gestation at delivery (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

A systematic review of the clinical research literature (e.g., Cochrane Review)

Additional Information Supporting Need for the Measure

- There is a lack of quality evidence on the benefits and harms of elective induction among women less than 41 weeks gestation. Two systematic reviews assessing elective induction at (or post) term,

were limited in drawing conclusions as most studies evaluated women greater than or equal to 41 weeks gestation.
- Modeling of the economic and health consequences of elective induction between 39 and 41 weeks suggest induction to be associated with higher costs and rates of cesarean delivery. Expenditures are particularly pronounced among nulliparous women of younger gestational age with unfavorable cervixes.
- Two recently published studies have successfully implemented quality improvement initiatives that have led to reductions in rates of induction over time. Despite the inherent limitations in their observational designs, these studies present promising findings for similar hospital-based initiatives.

Refer to *What is Known About the Maternal and Newborn Risks of Elective Induction of Women at Term?* for a summary of the evidence around the risks and benefits to mothers and newborns subsequent to induction at term when there is no medical indication to do so. The report's intention is to support efforts that seek to reduce rates of unnecessary induction among women who give birth in Ontario.

Evidence for Additional Information Supporting Need for the Measure

Konnyu K, Grimshaw J, Moher D. What is known about the maternal and newborn risks of elective induction of women at term?. Ottawa (Canada): Ottawa Hospital Research Institute; 2011 Mar. 13 p. (KTA Evidence Summary; no. 10).

Extent of Measure Testing

To validate the seven potential indicators as being appropriate for use throughout the province, the authors first extracted data from the BORN Information System (BIS) for fiscal year 2009 to 2010 to assess historical and current performance on these indicators across Ontario's 14 health regions (Local Health Integration Networks). Simultaneously, evidence summaries on each of the potential indicators were developed in collaboration with the Knowledge to Action Research Centre at the Ottawa Hospital Research Institute (Thielman et al., 2011; Konnyu, Grimshaw, & Moher, "What are the drivers," 2010; Konnyu, Grimshaw, & Moher, "What are the maternal," 2011; Konnyu, Grimshaw, & Moher, "What is known," 2011; Khangura, Grimshaw, & Moher, 2010). This group, which has expertise in the review and synthesis of literature to support evidence-informed health care decision-making, assisted with determining the level of scientific evidence to support each indicator. For example, the evidence summary on early term repeat Caesarean section (i.e., before 39 weeks' gestation) in a defined population determined that as a result of this practice there were indeed objective risks to babies that could be reduced by delaying delivery.

Following review of the data and evidence summaries, the committee removed one indicator and refined some of the others, leaving six. In five of the six, the potential for improvement in rates was obvious. The remaining indicator (rate of screening for group B streptococcus) is currently satisfactory throughout all health regions of the province; however, the committee felt it was important at the outset to have the dashboard reflect not only performance areas requiring improvement, but also areas in which performance was good.

Evidence for Extent of Measure Testing

Khangura S, Grimshaw J, Moher D. What is known about the timing of elective repeat cesarean section?. Ottawa (Canada): Ottawa Hospital Research Institute; 2010 May. 11 p.

Konnyu K, Grimshaw J, Moher D. What are the drivers of in-hospital formula supplementation in healthy term neonates and what is the effectiveness of hospital-based interventions designed to reduce formula supplementation?. Ottawa (Canada): Ottawa Hospital Research Institute; 2010 Oct. 13 p. (KTA Evidence Summary; no. 8).

Konnyu K, Grimshaw J, Moher D. What are the maternal and newborn outcomes associated with episiotomy during spontaneous vaginal delivery?. Ottawa (Canada): Ottawa Hospital Research Institute; 2011 Jul. 11 p. (KTA Evidence Summary; no. 13).

Konnyu K, Grimshaw J, Moher D. What is known about the maternal and newborn risks of elective induction of women at term?. Ottawa (Canada): Ottawa Hospital Research Institute; 2011 Mar. 13 p. (KTA Evidence Summary; no. 10).

Sprague AE, Dunn SI, Fell DB, Harrold J, Walker MC, Kelly S, Smith GN. Measuring quality in maternal-newborn care: developing a clinical dashboard. J Obstet Gynaecol Can. 2013 Jan;35(1):29-38. PubMed

Thielman J, Konnyu K, Grimshaw J, Moher D. What is the evidence supporting universal versus risk-based maternal screening to prevent group B streptococcal infection in newborns?. Ottawa (Canada): Ottawa Hospital Research Institute; 2011 Oct. 11 p. (KTA Evidence Summary; no. 14).

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Hospital Inpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Unspecified

Target Population Gender

Female (only)

National Strategy for Quality Improvement in Health Care

National Quality Strategy Priority

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Not within an IOM Care Need

IOM Domain

Not within an IOM Domain

Data Collection for the Measure

Case Finding Period

Three-month reporting period

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Institutionalization

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Total number of women who were induced with an indication of post-dates (greater than 41 weeks' gestation)

Note:

> Indication for induction of labour of post-dates need not be the primary indication for induction of labour, it can be any indication for induction. Records will be included for this indicator if 'Fetal | Post dates' is selected for 'All indications for induction of labour,' regardless if any additional indications are selected for this multi-select data element.
> The key performance indicators (KPIs) criteria are defined by the pertinent BORN Information System (BIS) data elements that are used to calculate the rates and proportion values for the respective Maternal Newborn Dashboard KPI. As well, pick-list values for each data element, when selected, will result in a patient record to be either included or excluded for a given KPI based on the KPI criterion definition.

Refer to the original measure documentation for a complete list of KPI criteria.

Exclusions
Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Number of women who were induced with an indication of post-dates and were less than 41 weeks' gestation (less than or equal to 40 weeks + 6 days gestation) at delivery

Note: Refer to the original measure documentation for a complete list of key performance indicator (KPI) criteria.

Exclusions
Unspecified

Numerator Search Strategy

Institutionalization

Data Source

Registry data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

BORN Information System (BIS) Maternal Newborn Dashboard (MND)

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Does not apply to this measure (i.e., there is no pre-defined preference for the measure score)

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Prescriptive Standard

Target:	Less than 5%
Warning:	5% to 10%
Alert:	Greater than 10%

Evidence for Prescriptive Standard

Sprague AE, Dunn SI, Fell DB, Harrold J, Walker MC, Kelly S, Smith GN. Measuring quality in maternal-newborn care: developing a clinical dashboard. J Obstet Gynaecol Can. 2013 Jan;35(1):29-38. PubMed

Identifying Information

Original Title

KPI 6 - Proportion of women who were induced with an indication of post-dates and were less than 41 weeks' gestation at delivery.

Measure Collection Name

Maternal-Newborn Care Performance Indicators

Submitter

Better Outcomes Registry and Network (BORN) Ontario - State/Local Government Agency [Non-U.S.]

Developer

Better Outcomes Registry and Network (BORN) Ontario - State/Local Government Agency [Non-U.S.]

Funding Source(s)

Better Outcomes Registry and Network (BORN) Ontario is funded by the Ontario Ministry of Health and Long Term Care.

Composition of the Group that Developed the Measure

Ann E. Sprague, RN, PhD (Better Outcomes Registry & Network [BORN] Ontario, Ottawa ON); Sandra I. Dunn, RN, PhD (BORN Ontario, Ottawa ON); Deshayne B. Fell, MSc (BORN Ontario, Ottawa ON); JoAnn Harrold, MD, FRCPC (Department of Pediatrics, Children's Hospital of Eastern Ontario, Ottawa ON); Mark C. Walker, MD, FRCSC (BORN Ontario, Ottawa ON; Departments of Obstetrics and Gynecology, and Epidemiology, University of Ottawa, Ottawa ON; Department of Obstetrics and Gynecology, The Ottawa Hospital and the Ottawa Hospital Research Institute, Ottawa ON); Sherrie Kelly, MSc (BORN Ontario, Ottawa ON); Graeme N. Smith, MD, PhD, FRCSC (Department of Obstetrics and Gynecology, Kingston General Hospital, Queen's University, Kingston ON), and clinical experts from the BORN Maternal Newborn Outcomes Committee – Dashboard Subcommittee

Financial Disclosures/Other Potential Conflicts of Interest

None declared.

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2014 Jul

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in April 2016.

Measure Availability

Source not available electronically.

For more information, contact BORN Ontario at 401 Smyth Road, Ottawa, ON, K1H 8L1; Phone: 613-737-7600 x 6022; Web site: www.bornontario.ca/en/ ; E-mail: info@bornontario.ca.

NQMC Status

This NQMC summary was completed by ECRI Institute on January 26, 2015. The information was verified by the measure developer on April 21, 2015.

The information was reaffirmed by the measure developer on April 4, 2016.

Copyright Statement

No copyright restrictions apply.

Production

Source(s)

Maternal newborn dashboard - key performance indicator criterion reference guide, version 1.3. Ontario (Canada): Better Outcomes Registry and Network (BORN) Ontario; 2014 Jul 2. 12 p.

Disclaimer

NQMC Disclaimer

The National Quality Measures Clearinghouseâ„¢ (NQMC) does not develop, produce, approve, or endorse the measures represented on this site.

All measures summarized by NQMC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public and private organizations, other government agencies, health care organizations or plans, individuals, and similar entities.

Measures represented on the NQMC Web site are submitted by measure developers, and are screened solely to determine that they meet the NQMC Inclusion Criteria.

NQMC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or its reliability and/or validity of the quality measures and related materials represented on this site. Moreover, the views and opinions of developers or authors of measures represented on this site do not necessarily state or reflect those of NQMC, AHRQ, or its contractor, ECRI Institute, and inclusion or hosting of measures in NQMC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding measure content are directed to contact the measure developer.